

## **Section II (Remarks)**

### **A. Summary of Amendment to the Claims**

By the present Amendment, claim 1 has been amended. Claims 2 and 3 were previously cancelled. No new matter within the meaning of 35 U.S.C. §132(a) has been introduced by the foregoing amendments.

The amendments made herein are fully consistent with and supported by the originally-filed disclosure of this application.

Thus, upon entry of the amendments, claims 1 and 4-35 will be pending, of which claims 5 and 9-35 are withdrawn from consideration.

### **B. Rejection Under 35 U.S.C. §112, first paragraph**

Claims 1, 4, and 6-8 were rejected by the examiner under 35 U.S.C. §112, first paragraph as failing to comply with the written description requirement. Specifically the examiner alleged that “[t]his is a new matter rejection.” Clarification is respectfully requested regarding whether the rejection is a new matter rejection under 35 U.S.C. §132, or whether the rejection is a written description rejection under 35 U.S.C. §112, first paragraph.

In order to ensure that the present response addresses all outstanding rejections, both grounds of rejection are discussed below.

- **New matter rejection**

A proper new matter rejection is made under 35 U.S.C. §132, which provides “...[n]o amendment shall introduce new matter into the disclosure of the invention.” (MPEP §706.03(o)) Specifically, the examiner alleged that recitation of SEQ ID NOs: 51-56 and 58 (of the recited SEQ ID NOs: 30-58) was not supported by the original specification. Applicants respectfully disagree.

Initially the examiner’s attention is respectfully directed to Section I above, where claim 1 has been amended. As amended, claim 1 recites “[a] *SGR* gene encoding a polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NOs: 30 to 58.” Support

for such claim is provided in the specification, as filed, in the description of Figs. 20-22 at pages 11-12 and page 26, in Figs. 20-22 and in SEQ ID NOs 51-56 and 58, themselves, as included in the Sequence Listing with the original filing of the application.

SEQ ID NOs: 51-56 and 58 therefore have support in the application as originally filed. Recitation of such sequences in claim 1 is not new matter, as defined by 35 U.S.C. §132. Since claims 4 and 6-8 do not independently recite SEQ ID NOs: 51-56 and 58, it is assumed that rejection of these claims is by virtue of their dependency upon claim 1. Claims 4 and 6-8 therefore do not contain new matter for the same reasons advanced above in support of claim 1.

- Written description rejection

Claims 1, 4 and 6-8 were rejected under 35 U.S.C. §112, requiring that the “specification shall contain a written description of the invention...” It is respectfully submitted that the specification contains a written description of the subject matter of rejected claims 1, 4 and 6-8.

It is well established that “[t]o satisfy the written description requirement, a patent specification must describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that the inventor had possession of the claimed invention.” (MPEP 2163, citing *Moba, B.V. v. Diamond Automation, Inc.*, 325 F.3d 1306, 1319, 66 USPQ2d 1429, 1438 (Fed. Cir. 2003); *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d at 1563, 19 USPQ2d at 1116.)

As amended, claim 1 recites “[a] *SGR* gene encoding a polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NOs: 30 to 58.” As detailed above, support for such claim is provided in the specification, as filed, in the description of Figs. 20-22 at pages 11-12 and page 26, in Figs. 20-22 and in SEQ ID NOs: 51-56 and 58, as included in the Sequence Listing with the original filing of the application. Furthermore, these sequences are shown in the specification to have substantial similarity to SEQ ID NOs 30-50 and 57 in the *SGR* domain I region of residues 49-207.

Clearly applicants had possession of SEQ ID NOs: 51-56 and 58 at the time of filing of the application, as those sequences were included in the application. As such, the written description requirement of 35 U.S.C. §112 is satisfied with respect to the subject matter of claim 1 and of claims 4 and 6-8, dependent therefrom.

**C. Rejection Under 35 U.S.C. §112, first paragraph**

Additionally in the Office Action mailed April 5, 2010 the examiner rejected claims 1, 4 and 6-8 were rejected under 35 U.S.C. §112, second paragraph, as indefinite with respect to recitation of the range of homology of “at least 60%.” The examiner’s attention is respectfully directed to Section I, above, wherein claim 1 has been amended such that it no longer contains a recitation of a range of homology. As such the rejection is moot and withdrawal is respectfully requested.

**D. Rejection Under 35 U.S.C. §112, first paragraph**

In the Office Action mailed April 5, 2010, the examiner rejected claims 1, 4 and 6-7 under 35 U.S.C. §102 as unpatentable over Genbank GI:17380888 (September 18, 2002), hereinafter “Yamada et al.” in light of Ren et al., *Plant Physiology*, Jul 2007; 144(3): 1429-41, hereinafter “Ren et al.” Applicants respectfully traverse the rejection.

Anticipation of a claim requires the disclosure in a single prior art reference of each element of the claim under consideration. (*Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987.)

The examiner’s attention is again respectfully directed to Section I above, in which independent claim 1 has been amended. As amended, claim 1 recites “[a] *SGR* gene encoding a polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NOs: 30 to 58.” Rejected claims 4 and 6-7 are of dependent form under claim 1 and therefore contain all limitations of claim 1.

Yamada et al. was cited by the examiner as “teach[ing] an Arabidopsis open reading from encoding a protein having at least 79% sequence identity to SEQ ID NO: 30 over the region of amino acid residues 49-207...” (Office Action mailed April 5, 2010, p. 4)

Ren et al. is an article with a publication date (July 2007) after the filing of the present application (July 26, 2006), which is cited as providing evidence of the stay green characteristic of the protein of Yamada et al.

However Yamada et al., even viewed in light of Ren et al., does not describe a *SGR* gene encoding a polypeptide comprising an amino acid sequence selected from the group consisting of

SEQ ID NOs: 30 to 58, as is recited in Applicants' claim 1. As amended, claim 1 no longer contains recitation of homology to the SGR domain I of SEQ ID NO: 30. The claims recites SEQ ID NOs: 30-58 with particularity.

Since Yamada et al. does not describe a *SGR* gene as set forth in claim 1, Yamada et al. does not anticipate the claimed invention. Claims 4 and 6-7 depend from claim 1, and therefore are not anticipated for the same reasons advanced above in support of claim 1.

Accordingly, withdrawal of the rejection of claims 1, 4, 6 and 7 under 35 U.S.C. § 102(b) as being anticipated by Yamada et al. is respectfully requested.

### CONCLUSION

Based on the foregoing, all of applicants' pending claims 1, 4 and 6-8 are patentably distinguished over the art, and in form and condition for allowance. The examiner is requested to favorably consider the foregoing and to responsively issue a Notice of Allowance.

The time for responding to the April 5, 2010 Office Action without extension was set at three months, or July 5, 2010. Applicants hereby request a one month extension of time under 37 CFR § 1.136 to extend the deadline for response to August 5, 2010. Payment of the extension fee of \$65.00 specified in 37 C.F.R. § 1.17(a)(1), as applicable to small entity, is being made by on-line credit card authorization at the time of EFS submission of this Response. Should any additional fees be required or an overpayment of fees made, please debit or credit our Deposit Account No. 08-3284, as necessary.

If any issues require further resolution, the examiner is requested to contact the undersigned attorneys at (919) 419-9350 to discuss same.

Respectfully submitted,

/steven j. hultquist/  
Steven J. Hultquist  
Reg. No. 28,021  
Attorney for Applicants

/kelly k. reynolds/

Kelly K. Reynolds  
Reg. No. 51,154  
Attorney for Applicants

INTELLECTUAL PROPERTY/  
TECHNOLOGY LAW  
P.O. Box 14329  
Research Triangle Park, NC 27709  
Phone: (919) 419-9350  
Fax: (919) 419-9354  
Attorney File No.: 4240-145

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